IN THE CLAIMS:

Please cancel claims 37-42.

1.   (currently amended) A method for the isolation of stem cells of a mammal, the method comprising:

obtaining a sample of cells from the mammal;

sorting, from the sample, cells that express β_2-microglobulin from cells that do not express β_2-microglobulin; and

selecting stem cells from the sample of cells that do not express β_2-microglobulin.

2.   (original) The method of claim 1, wherein the step of sorting comprises sorting by fluorescent activated cell sorting.

3.   (original) The method of claim 1, wherein the step of sorting comprises sorting by magnetic bead cell sorting.

4.   (original) The method of claim 1, wherein the step of sorting comprises sorting by double magnetic bead cell sorting.

5.   (original) The method of claim 1, wherein the step of selecting stem cells further comprises sorting, from the sample of cells that do not express β_2-microglobulin, cells that express a stem cell marker from cells that do not express a stem cell marker.

Claims 6-7 (cancelled)

8.   (original) The method of claim 5, wherein the stem cell marker is a protein expressed by one or more genes encoding the major histocompatibility complex.

9.   (original) The method of claim 8, wherein the one or more genes encode human leukocyte antigens.

2

10.   (previously presented) The method of claim 5, wherein the marker is Thy-1.

11.   (previously presented) The method of claim 5, wherein the marker is selected from the group consisting of RT1A, RT1B, and RT1D.

12.   (previously presented) The method of claim 5, wherein the marker is selected from the group consisting of flt-3, CD 34, c-Kit, and CD38.

13.   (original) The method of claim 5, wherein the step of selecting stem cells further comprises sorting by fluorescent activated cell sorting.

14.   (original) The method of claim 5, wherein the step of selecting stem cells further comprises sorting by magnetic bead cell sorting.

15.   (original) The method of claim 5, wherein the step of selecting stem cells further comprises sorting by double magnetic bead cell sorting.

16.   (original) The method of claim 1, wherein the sample of cells is obtained from an adult mammal.

17.   (original) The method of claim 1, wherein the sample of cells is obtained from a fetus.

18.   (original) The method of claim 1, wherein the sample of cells is obtained from bone marrow.

19.   (original) The method of claim 1, wherein the sample of cells is obtained from the liver of a mammal.

20.   (original) The method of claim 1, wherein the sample of cells is obtained from the brain of a mammal.

21.   (currently amended) A method for the isolation of stem cells of a mammal, the method comprising:

obtaining a sample of cells from the mammal;

sorting, from the sample, cells that express β_2-microglobulin from cells that do not express β_2-microglobulin; and

sorting, from the sample of cells that do not express β_2-microglobulin, cells that express a stem cell marker from cells that do not express a stem cell marker.

22.   (original) The method of claim 21, wherein the step of sorting comprises sorting by fluorescent activated cell sorting.

23.   (original) The method of claim 21, wherein the step of sorting comprises sorting by magnetic bead cell sorting.

24.   (original) The method of claim 21, wherein the step of sorting comprises sorting by double magnetic bead cell sorting.

25.   (original) The method of claim 21, wherein the stem cell marker is a protein expressed by one or more genes encoding the major histocompatibility complex.

26.   (original) The method of claim 25, wherein the one or more genes encode human leukocyte antigens.

27.   (previously presented) The method of claim 21, wherein the marker is Thy-1.

28.   (previously presented) The method of claim 21, wherein the marker is selected from the group consisting of RT1A, RT1B, and RT1D.

29.   (previously presented) The method of claim 21, wherein the marker is selected from the group consisting of flt-3, CD 34, c-Kit, and CD38.

4

30.   (original) The method of claim 21, wherein the sample of cells is obtained from an adult mammal.

31.   (original) The method of claim 21, wherein the sample of cells is obtained from a fetus.

32.   (original) The method of claim 21, wherein the sample of cells is obtained from bone marrow.

33.   (original) The method of claim 21, wherein the sample of cells is obtained from the liver of a mammal.

34.   (original) The method of claim 21, wherein the sample of cells is obtained from the brain of a mammal.

35.   (original) The method of claim 21, wherein the cells that express a stem cell marker are pluripotent stem cells.

36.   (original) The method of claim 21, wherein the cells that express a stem cell marker are embryonal stem cells.

Claims 37-42 (cancelled)

0